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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/068,813 | 02/05/2002 | Mark H. Schultz | 1094.183US1 | 8434 |

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| EXAMINER | |
|---|---|
| NGUYEN, DANNY | |
| **ART UNIT** | **PAPER NUMBER** |
| 2836 | |

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/068,813 | SCHULTZ ET AL. | |
| | Examiner | Art Unit | |
| | Danny Nguyen | 2836 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,11,18,19,21-24 and 26* is/are rejected.

7)☒ Claim(s) *2-20 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1, 11, 18, have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 11, 18, 19, 21-24, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Rozman et al. (USPN 5,055,765).

Regarding claim 1, Rozman et al disclose a load power sensing circuit (comprising a load current sensor and a load voltage sensor, shown in fig. 1, e.g. see col. 6, lines 33-38) including an input for coupling to a load (18) and an output providing a load power signal measuring an indication of power delivered to the load (e.g. see col. 3, lines 19-23 and col. 44-47), and a voltage regulator circuit (20), including an output configured for coupling to the generator exciter (24) and an input coupled to the load sensor (such as the output of current sensor and voltage sensor coupled to the voltage regulator 20) to receive the sensed power indication, the regulator (20) decreases a magnitude of voltage delivered from a generator (10) to the load when the sensed load power indication reaches maximum level to prevent the power delivered from generator

(10) to the load from exceeding a maximum load power value (e.g. see col. 3, lines 15-65).

Regarding claim 11, Rozman et al disclose an engine generator set (see fig. 1) comprises an engine (11), a generator (10) driven by the engine (see col. 2, lines 34-35) the generator (10) having an output coupled to the load (18), the generator including a generator exciter (e.g. 24) controlling a load voltage using a signal received at the exciter (24) (e.g. see col. 2, lines 47-51 and col. 4, 5, lines 68-5), a load power sensing circuit (comprising a load current sensor and a load voltage sensor 19, e.g. see col. 6, lines 33-38) including an input for coupling to the load (18) and an output providing a load power signal measuring an indication of power delivered to the load (col. 3, lines 55-65), and a voltage regulator circuit (20), including an output configured for coupling to the generator exciter (24) and an input coupled to the load sensor (such as the output of current sensor and voltage sensor coupled to the voltage regulator 20) to receive the sensed power indication (from the current and voltage sensors shown in fig. 1), the regulator (26) decreases a magnitude of voltage delivered from a generator (10) to the load when the sensed load power indication reaches maximum level to prevent the power delivered from generator (10) to the load from exceeding a maximum load power value (e.g. see col. 3, lines 15-65).

Regarding to claims 18, 22, Rozman et al disclose a method for delivering power to a load, the method includes sensing a load power (e.g. see col. 6, lines 33-38) delivered from a generator (10) to the load (18), determining whether the delivered power has reached a maximum load, and if the delivered power has reached a

maximum load, then reducing a load voltage to clamp the power about the maximum value (e.g. see col. 3, lines 44-65).

Regarding to claim 19, Rozman et al disclose determining whether the delivered power has reached a maximum load, and if the delivered power has reached a maximum load includes comparing the load power to a reference power (shown in fig. 2), computing a different between the load power and the reference power (e.g. see col. 6, lines 33-38).

Regarding claims 21 and 26, Rozman et al. disclose switching (50) in a load power control feedback loop (see fig. 1) when the load power exceeding the threshold value.

Regarding claims 23 and 24, Rozman et al. disclose using a feedback loop to control the load voltage (the feedback loop back the load 18 coupled to the output sensing voltage 19) when the load power is below the threshold value (in a normal operation) and prevent the load from exceeding maximum value, and reducing the load voltage when the load power reached the maximum value (e.g. see col. 3, lines 63-65).

***Allowable Subject Matter***

3. Claims 2-10, 12-17, and 20, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 2 and 12 recite an overload protection circuit includes a load power calculation circuit, including a fist input coupled to the load voltage sensing circuit output to receive the load voltage signal, a second input connected to the load current sensing circuit output to receive the load current signal and coupled the load power sensing circuit output to provide the load power signal based on a multiplication of the load voltage signal and the load current signal and a power factor calculated using phase angle between the load voltage signal and the load current signal.

Claims 3 and 13 recite an overload protection circuit includes a first different circuit, including a first input coupled to the output of the voltage reference circuit to receive the voltage reference, and a second input coupled to the output of the load voltage sensing circuit to receive the load voltage signal, and a third input coupled to the output of the load power sensing circuit to receive a signal based on the load power signal, the first different circuit also including an output providing a first difference signal indicative of difference between the load voltage and the sum of a reference voltage and the signal based on the load power signal.

Claims 10 and 17 recites the voltage regulator includes a voltage reference circuit including an input coupled to the load power sensing circuit output and providing a reference voltage, and the reference voltage is constant when the load is below the threshold level and varies when the load is exceeding the maximum level.

Claims 20 and 25 recite a method for generating AC power and delivering the power to the load further comprising the step of computing a PID control signal using the different between the load power and the reference power value.

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (703)-305-5988. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

Stephen W Jackson
11-28-03

DN

DN
November 26, 2003

STEPHEN W. JACKSON
PRIMARY EXAMINER